

Date: Monday, 10/22/2007 3:07:46 PM
User: Kim Johnston

Process Sheet

Customer : CU-DAR001 Dart Helicopters Services Drawing Name : AFT X-TUBE EXT HEIGHT(-013)
Job Number : 35300
Estimate Number : 10563
P.O. Number : N/A Part Number : D205596107
This Issue : 10/22/2007 S.O. No. : N/A Drawing Number : D205596107
Prsht Rev. : NC Project Number : N/A
First Issue : N/A Type : LANDING GEAR Drawing Revision : A
Previous Run : 35224 Material : N/A
Written By : Due Date : 11/10/2007 Qty: 1 Um: Each
Checked & Approved By : 07.10.22
Comment : Est Rev: 05.03.21 Added bending procedure KJ/JLM

Additional Product

Job Number:



Seq. #: Machine Or Operation: Description :

1.0 DC DOCUMENT CONTROL



DS19396

KS 07/11/07

Comment: DOCUMENT CONTROL

Photocopy D205-594 bluefile & type labels per PPP D205-596-107CH001

07/12/10

2.0 D2890 Aft Crosstube



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Pick:

Qty Part number Description Batch

1 D2890 Aft Crosstube B33978

EL 7-10-29

3.0 LANDING GEAR 1 LANDING GEAR RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

Mark 20.36" for cutting from tangential line in the straight section from D2890 as per Dwg wall template. EL 7-10-30

4.0 QC15 DIMENSIONAL CHECK OF X-TUBES



Comment: DIMENSIONAL CHECK OF X-TUBES

7-10-30

5.0 LANDING GEAR 1 LANDING GEAR RESOURCE 1



Comment: LANDING GEAR RESOURCE 1


1-Cut as per Dwg D205-596-107

DP 7-10-30

1944m 27-11-06 JD 7-10-31

2-Deburr & Inspect for surface damage. Polish cut surface. Scribe part # and batch # on one end of tube.

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
7.12.06	13	MS21920-28 CLAMPS USED INSTEAD OF -30				 07.12.06 pte 051042	

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
 QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Monday, 10/22/2007 3:07:46 PM
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Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: AFT X-TUBE EXT HEIGHT(-013)

Job Number: 35300

Part Number: D205596107

Job Number:



Seq. #:

Machine Or Operation:

Description :

6.0

~~QC15~~

INSPECT WORK TO CURRENT STEP



check light at 105



10-11-21 (1)

Comment: INSPECT WORK TO CURRENT STEP

7.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Touch up ends of the tube with Chemical Conversion Coat per QSI 005 4.1

AWM 07-11-01

JB 7-10-31

8.0

~~QC15~~

SECOND CHECK



Comment: SECOND CHECK

9.0

SPRAY PAINTING

SPRAY PAINTING



Comment: SPRAY PAINTING

1-Prime inside and outside with Immron per QSI 005 4.2

ml 07 11 30

(1)

10.0

QC14

INSPECT SPRAY PAINT



Comment: Inspect Spray Paint

207-12-01

11.0

D2856600

Abrasion Strip



Comment: Qty.: 1.6810 f(s)/Unit Total: 1.6810 f(s)

Pick:

Qty Part number

Description

Batch

2 D2856-600(10.09") Abrasion Strip

replaced by rubber cushion

D3595-063-530

MA asper DSI 9396

B 53834

207-12-01

12.0

D29401

Support



Comment: Qty.: 2.0000 Each(s)/Unit Total: 2.0000 Each(s)

Pick:

Qty Part number

Description

Batch

2 D2940-1


Support

~~32780~~ 32780

ml 07 12 05

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes (No) DQA:  Date: 01/12/10

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Monday, 10/22/2007 3:07:46 PM
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Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: AFT X-TUBE EXT HEIGHT(-013)

Job Number: 35300

Part Number: D205596107

Job Number:



Seq. #:

Machine Or Operation:

Description :

13.0

MS21920-28-30

Clamp(per MIL-DTL-8783C)



Comment: Qty.: 4.0000 Each(s)/Unit Total : 4.0000 Each(s)

Pick:

Qty Part number

Description

Batch

4 MS21920-28-28 Clamp 104423

as per DSR 9396

ml 07 12 05

14.0

LANDING GEAR 1

LANDING GEAR RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

1. Install abrasion strips per QSI 035 position using DT8582. Install supports and clamps per Dwg D205-596-107. Torque clamps to 80-100 in lb. Seal edges of support using Sikaflex

Magnabond

AVR Sikaflex 291

105379

Expiry date: 2008/04 Time 2:00pm ml 07 12 05

per DSR 9396 see attached
per ENW 75

15.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

5 07/12/02 (4)

16.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and pack for shipping as per PPP D205-596-107

Location:

PPP Rev:

0 7/12/02 5 (4)

17.0

QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

1
2007/12/10

Job Completion



W Kim
2007/12/10

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

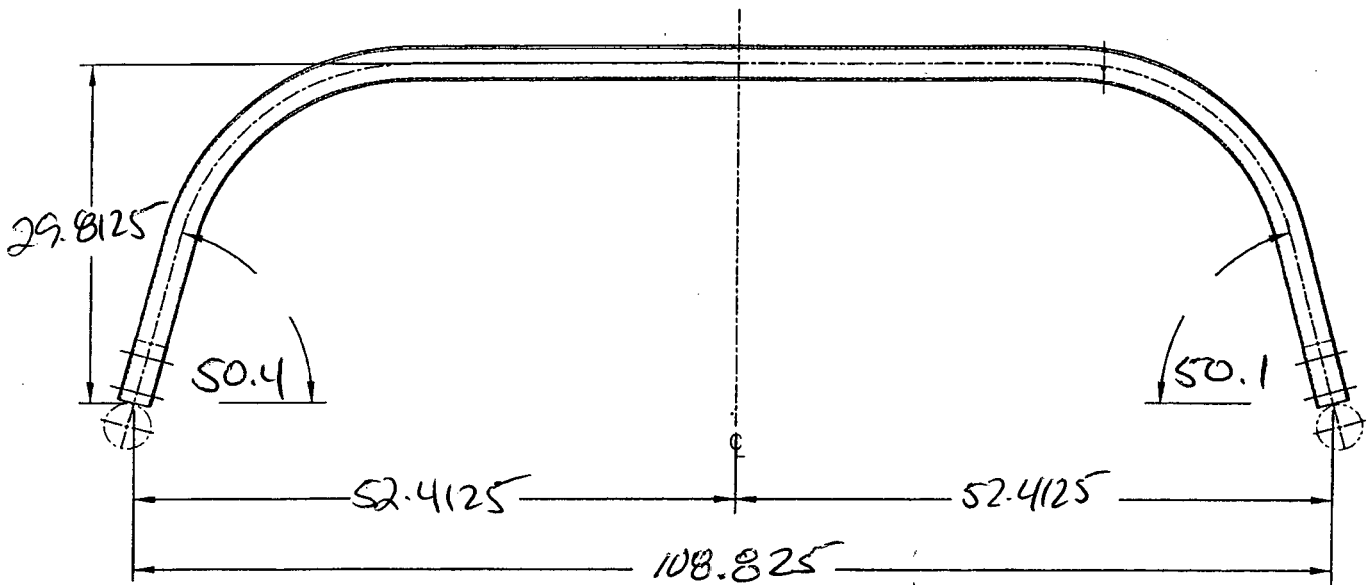
QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD		Work Order:	35300
Description: Crosstube High-High Aft		Part Number:	D205-596-107
Inspection Dwg: D205-596-107 Rev: A		Page 1 of 1	

Required Dimension	Min	Max
Height	29.7	29.9
1/2 Span	52.4	52.6
Angle	49	52
Total Span	104.8	105.2

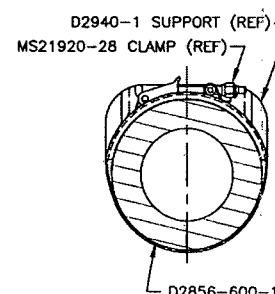
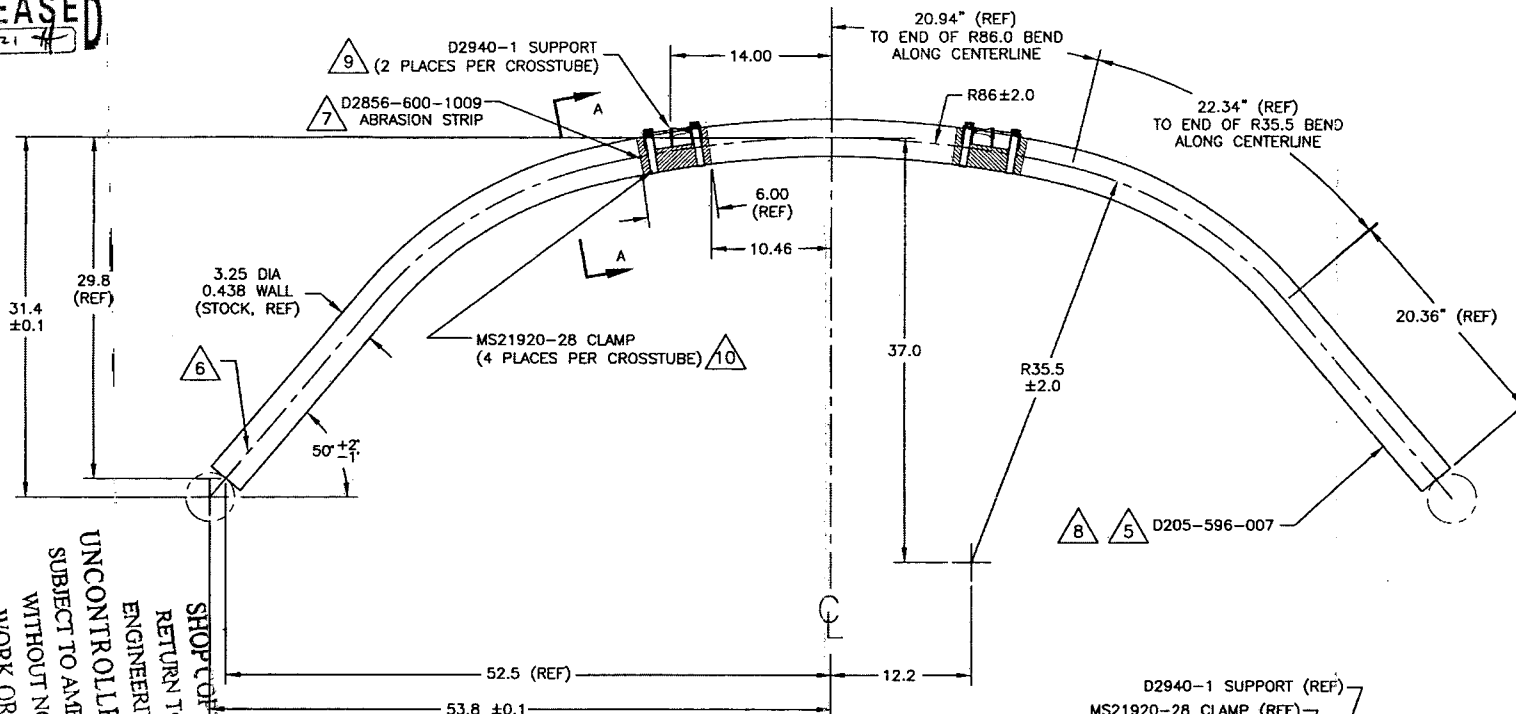


Comments

QC15 Inspection	
Date	14.10.30

Rev	Date	Change	Revised by	Approved
A	07.02.06	New Issue	KJ/JM	

RELEASED



SECTION A-A
SCALE 2:5

GENERAL NOTES:

- 1) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 2) MATERIAL: MANUFACTURE FROM D6008-180
FINISHED LENGTH = 127.28
- 3) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2
PAINT OUTSIDE PER DART QSI 005 4.2
- 4) PART IS SYMMETRIC ABOUT CENTERLINE
- 5) BEND PROGRESSIVELY WITH A MINIMUM OF 3 PASSES. MAXIMUM TUBE FLATTENING DUE TO BENDING IS 6% BASED ON O.D.
- 6) SCRIBE DART PART NUMBER AND BATCH NUMBER IN THIS AREA WITH VIBRATING STYLUS
- 7) INSTALL D2856-600-1009 ABRASION STRIP WITH A 0.13 (REF) GAP ON BOTTOM SIDE OF CROSSTUBE, CENTERED OPPOSITE D2940-1 SUPPORT, PER QSI 035
- 8) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005\"
- 9) SEAL EDGES OF SUPPORTS USING SIKAFLEX-241/-291 SEALANT (OPTIONAL)
- 10) TORQUE CLAMPS 80 TO 100 IN-LB

SHOP COPY
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 WITHOUT NOTICE
 WORK ORDER
 NO. 35300

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A		02.11.20	NEW ISSUE
DESIGN	✓	DRAWN BY	✓
CHECKED	✓	APPROVED	✓
DATE	02.11.20	TITLE	CROSSTUBE AFT EXTENDED
		DRAWING NO.	D205-596-107
		SCALE	1:10

DART DART AEROSPACE LTD.
HAMPSHIRE, ENGLAND, CANADA



DART SERVICE INSTRUCTION

TO AMEND INSTALLATION INSTRUCTIONS IIN-D205-594 Rev. C (AND EARLIER) AND INSTRUCTIONS FOR CONTINUED AIRWORTHINESS ICA-D205-594 Rev. 2 (AND EARLIER)
REF. CANADIAN STC: SH03-6
REF. FAA STC: SR01742NY

For D205-596-101/-103 Crosstubes (ref. 39" Landing Gear) or D205-596-105/-107 Crosstubes (ref. 31" Landing Gear) at CHG 002 or later, the D2856-600-851/-1009 Abrasion Strips have been removed, the D2893-1 and D2940-1 Supports have been bonded onto the crosstubes using Magnobond 6398 and D3595-063-450/-530 Rubber Cushions have been installed underneath the MS21920-26/-30 Clamps. Amend Parts List of IIN-D205-594 Section 5 and ICA-D205-594 Section 32.8 as follows:

Remove:

QTY -101	QTY -103	QTY -105	QTY -107	Part Number	Description
2		2		D2856-600-851	ABRASION STRIP
4		4		MS21920-24	CLAMP
	2		2	D2856-600-1009	ABRASION STRIP
	4		4	MS21920-28	CLAMP

Add:

QTY -101	QTY -103	QTY -105	QTY -107	Part Number	Description
4		4		D3595-063-450	RUBBER CUSHION
4		4		MS21920-26	CLAMP
	4		4	D3595-063-530	RUBBER CUSHION
	4		4	MS21920-30	CLAMP

To prevent the supports from shifting on D205-596-101/-103/-105/-107 Crosstubes at CHG 001, the D2893-1 or D2940-1 Supports should be removed and re-installed as follows:

- Follow section 32.1 of ICA-D205-594 for the removal of the crosstubes from the helicopter.
- Remove the MS21920-24/-28 Clamps that fasten the D2893-1 and D2940-1 Supports from the crosstubes per Section 32.3 of ICA-D205-594.
- Remove the D2856-600-851/-1009 Abrasion Strips from the crosstube per section 32.5 of ICA-D205-594.
- Inspect the crosstube surface underneath the supports for corrosion and mechanical damage per items 5.3.1 and 5.3.2 of the 300 hour inspection. Repair damage within acceptable limits and touch up finish per item 5.3.3 of the 300 hour inspection.
- Inspect the supports for corrosion and mechanical damage per items 5.3.4 of the 300 hour inspection. Repair damage within acceptable limits and touch up finish per item 5.3.4 of the 300 hour inspection.
- Abrade area to which support will be applied with 400 grit sandpaper. Saturate a clean cloth with MEK or 4105S Wash'n'Wipe Degreaser or equivalent and wipe area until there is no residue.
- Apply a 0.03" to 0.06" thick layer of Magnobond 6398 underneath D2893-1 or D2940-1 Supports and re-install the Supports on the crosstube as shown in Figure 1. Install a D3595-063-450/-530 Rubber Cushion on each MS21920-26/-30 Clamp. Position and secure the D2893-1 or D2940-1 Supports on the crosstube using MS21920-26/-30 Clamps. Torque clamps to 80-100 in-lb. Let the D205-596-101/-103/-105/-107 Crosstube Assembly cure before re-installing the crosstube on the aircraft.
- Re-install the D205-596-101/-103/-105/-107 crosstube per section 32.2 of ICA-D205-594.

CANADA DEPARTMENT OF TRANSPORT AIRCRAFT CERTIFICATION BRANCH DAO # 01-O-01	
APPROVED	
BY:	
D. SHEPHERD (DE # 02)	
DATE:	07.11.16
CERT. NO.:	SH03-6
ISSUE NO.:	3

A	NEW ISSUE	MB	07.11.16
REV.	DESCRIPTION	BY	DATE
DESIGN		DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN		DRAWING NO.	REV. A
CHECKED		DSI 9396	SHEET 1 OF 2
MFG. APPR.		TITLE	SCALE
APPROVED		CROSSTUBE SUPPORT CHANGE	NTS
DE APPR.		COPYRIGHT © 2007 BY DART AEROSPACE LTD	
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For customers who would like to upgrade their D205-596-101/-103/-105/-107 Crosstubes from CHG 001 to CHG 002, the following kits can be obtained from Dart:

DSI 9396-XXX PARTS LIST

QTY -011	QTY -013	Part Number	Description
X		DSI 9396-011	FWD CROSSTUBE SUPPORT CHANGE (D205-596-101/-105 FWD CROSSTUBE)
	X	DSI 9396-013	AFT CROSSTUBE SUPPORT CHANGE (D205-596-103/-107 AFT CROSSTUBE)
4		D3595-063-450	RUBBER CUSHION
4		MS21920-26	CLAMP
	4	D3595-063-530	RUBBER CUSHION
	4	MS21920-30	CLAMP

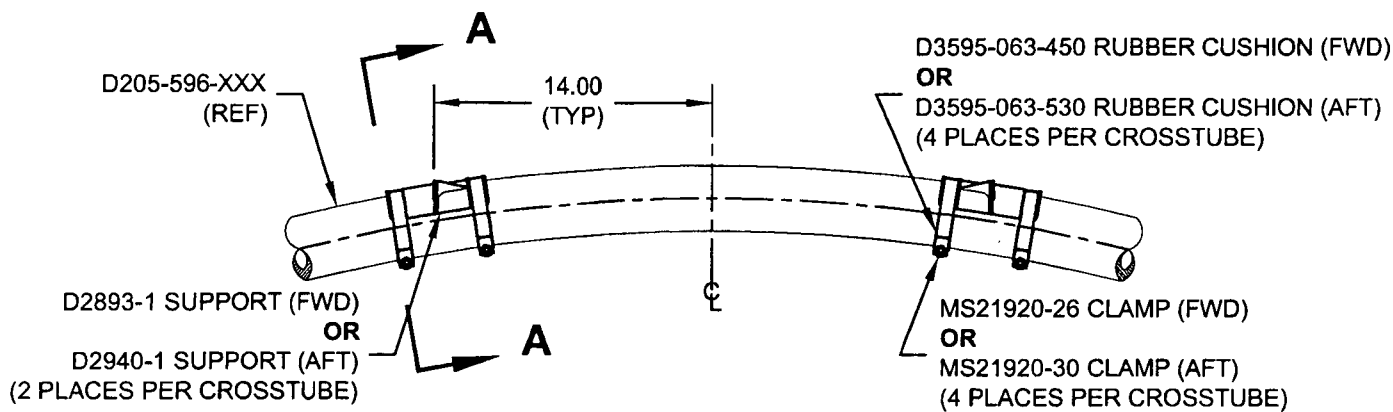
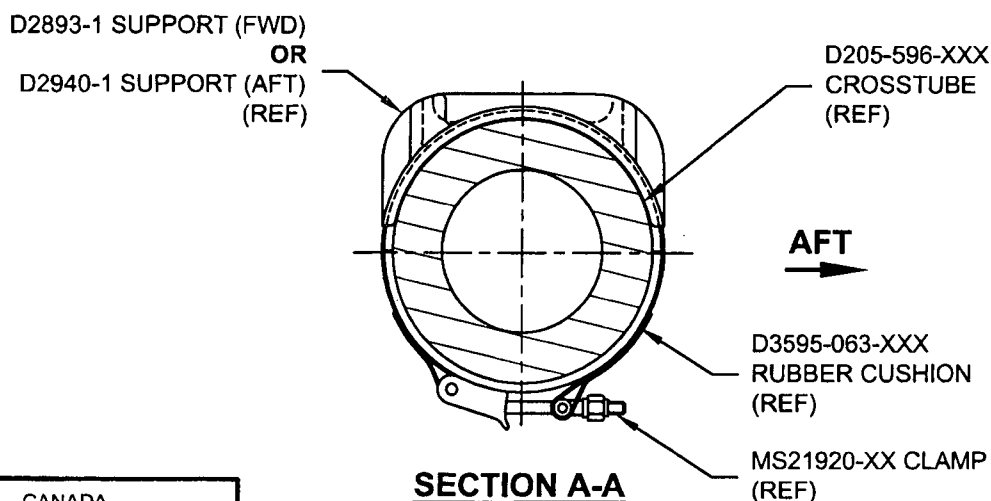


FIGURE 1: INSTALLATION OF SUPPORT ON CROSSTUBE



CANADA
DEPARTMENT OF TRANSPORT
AIRCRAFT CERTIFICATION
BRANCH
DAO # 01-O-01

APPROVED
BY: *[Signature]*
D. SHEPHERD (DE # 02)

DATE: 07.11.16
CERT. NO.: SH03-6
ISSUE NO.: 3

DESIGN.		DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA
DRAWN		
CHECKED	<i>[Signature]</i>	DRAWING NO. REV. A
MFG. APPR.	<i>[Signature]</i>	DSI 9396 SHEET 2 OF 2
APPROVED	<i>[Signature]</i>	TITLE SCALE
DE APPR.	<i>[Signature]</i>	CROSSTUBE SUPPORT CHANGE NTS
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